11/17/23 • BIG CHEMICAL › NEWS

# Sperm Counts Fell by 62.3% in Past 50 Years — Exposure to Two Pesticide Classes Commonly Used on Food May Be Partly to Blame

*Organophosphate and N-methyl carbamate pesticides used at residences and on food crops were associated with lower sperm counts, according to a study in Environmental Health Perspectives — and the higher the exposure, the greater the effect.*

By Angelo DePalma, Ph.D.

9

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Two common classes of pesticides may be responsible for the 50-year-long drop in global sperm counts.

According to a paper in Environmental Health Perspectives, men with the highest exposure to organophosphate and N-methyl carbamate pesticides had sperm counts almost one-third lower than men in the lowest-exposure group.

During the last 50 years, sperm concentrations in human semen have dropped by 51.6%, and total sperm counts fell 62.3%. Low sperm counts reduce a man's ability to father children.

**'Strength of evidence warrants reducing exposure'**

Led by Melissa Perry, Sc.D., an epidemiologist at George Mason University, investigators examined relevant epidemiologic studies published before Aug. 11, 2022, in PubMed, Scopus and Web of Science article archives plus the Centers for Disease Control and Prevention's NIOSHTIC-2 Publications Search and the Science.gov gateway to federal science activity.

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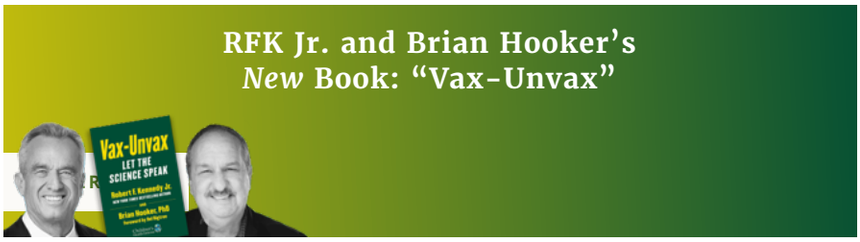
From 20 studies on 21 populations of 1,774 adult men and 42 exposure levels, the difference in sperm concentration between more- and less-exposed men was 30%.




Researchers determined their data to be "of moderate quality" but with sufficient evidence to associate the highest exposure levels to drops in sperm count.

"The strength of evidence warrants reducing exposure to OP [organophosphate pesticides] and NMC [N-methyl carbamate] insecticides now to prevent continued male reproductive harm," they concluded.

As a precaution against selection bias, which is common in literature-based reviews or meta-analyses, the scientists ran their choices through the Navigation Guide systematic review methodology, a method for reducing bias and providing transparency to environmental health studies.

This process injects the data analysis with "what-if" scenarios with the intent to reduce the observed effect. However, every attempt led to the same strong association between pesticide exposure and reduced sperm counts.

"We were surprised to see such robust findings," Perry said in a video interview on the George Mason University website. "We weren't really sure, if we looked at all of the studies combined, would we find an aggregate effect, and if we applied such advanced calculations, would we still see this association show up."

**Organophosphates interfere with nerve impulse transmission**

Organophosphate pesticides, which are widely used on food crops, include products that contain diazinon, ethoprop, tribufos and phosmet, which are applied in both agricultural and non-agricultural settings.

Diazinon and phosmet control insects, ethoprop kills worms and other soil pests while tribufos defoliates cotton right before harvest.

Organophosphates interfere with nerve impulse transmission by blocking acetylcholinesterase, an enzyme that breaks down the neurotransmitter acetylcholine, which plays a role in memory, learning, attention, arousal and involuntary muscle movement.

Once the acetylcholinesterase enzyme stops working, acetylcholine remains and builds up on the nerve cell, causing it to fire repeatedly.

Animals and humans exposed to organophosphates exhibit symptoms that include hyperactivity, uncoordinated movements, tremors, convulsions and paralysis.

The U.S. Environmental Protection Agency (EPA) originally planned to complete the quindecennial safety review for organophosphate pesticides between 2024 and 2025. But after recognizing the health risks posed by this class of pesticides, the agency announced on March 15, 2023, that it was moving its reevaluation up by two years.

"The science is clear," said Michal Freedhoff, assistant administrator of the EPA's Office of Chemical Safety and Pollution Prevention, in an EPA press release. Freedhoff added:

> "Some uses of these four pesticides pose a serious health risk to the people that are exposed to them. … That's why we're taking early action now. While we know there's still a lot of work to finish our review of these pesticides, today's announcement helps deliver on our promise to protect farmworkers and uphold our commitment to environmental justice."

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**N-methyl carbamates in high doses can paralyze respiratory system**

N-methyl carbamates, used in homes, gardens and agriculture, are a diverse family of chemical ingredients. Two carbamates, aldicarb and fenoxycarb, are used mainly in residential settings while aldicarb and methomyl are mostly used in agriculture.

Since they are acetylcholinesterase blockers, they work similarly to the organophosphates.

Human exposure to N-methyl carbamates causes weakness, blurred vision, headache, nausea, tearing, sweating and tremors in humans. Very high doses kill by paralyzing the respiratory system.

Pesticides are comprised mainly of solvents that dissolve, stabilize and disperse the active chemical ingredients. The risks of exposure to the solvent are an open question because the pesticide formulations are often proprietary.

Although solvents are generally not as toxic as carbamates or organophosphates, the alcohols, glycols, petroleum distillates and chlorinated hydrocarbons they contain are sources of additional toxic exposure.

Pesticide production proceeds unabated and these products continue to be widely applied despite the increasingly apparent dangers, and the fact that they are dangerous even if used as directed.

“Pesticides are specifically formulated to be biologically active, to kill things,” Perry said.

“The Wuhan Cover-Up”
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**Pesticides not the only cause of declining sperm counts**

Many risk factors have been associated with low sperm counts, including:

- Varicoceles, reversible swelling of veins around the testicles, which also reduce sperm quality.
- Infections of sex organs or tissues, including sexually transmitted diseases.
- Ejaculation problems resulting from diabetes, spinal injuries or surgery.
- Medications, particularly alpha-blocker blood pressure medications. Some of these problems can be reversed but some are permanent.
- Benign or malignant tumors and their associated treatments.
- Drug, alcohol and tobacco use.
- Emotional stress and depression.
- Hormone imbalances.
- Sperm blockages.
- Chromosome defects.
- Celiac disease.
- Age, nutrition and lifestyle.

This long list of risk factors reduces the possibility that any one case of low sperm count is due to pesticide exposure alone. A deeper understanding of the pesticide-sperm link, and the relative contributions of these risk factors, will only arise through new experimental designs, larger study sample sizes and more studies.

“At the same time, given the weight of evidence in front of us, as our meta-analysis shows, there is plenty of evidence to advocate for reducing exposure to insecticides, especially among men who are intending to plan their family and father children," Perry said.

"Taken together, this should be adequate evidence for policymakers to make some important decisions about how to reduce individual insecticide exposure, and to recognize it as a public health issue."


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**Angelo DePalma, Ph.D.**

Angelo DePalma, Ph.D., is a science reporter/editor for The Defender.



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**Ted**
14 days ago

Does anyone else think that this was probably done on purpose because the "elite" think that there are too many of us?

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**Naga** ↗ Ted
14 days ago

Of course. None of this was a mistake. They have been working with mRNA technology for some years now and they always had to stop at the animal trials because they all would die, except when they "declared" an emergency which of course, allowed for skipping the animal trials and the public became the "animals". Remember: Even on mainstream media, they said that the clinical trials were going on through January 31st 2023. Now, just think about that: They were doing a clinical trial on the entire population!!! Worse, they knew that the animals didn't survive and they are hiding the human deaths. It was no mistake that they changed the way that death certificates were done. If part one or part two listed Covid-19, then you died of Covid-19. Never mind if you had a massive heart attack. You didn't die of that, you died of Covid-19! Remember all that bull about how the drug had to be kept at a certain temperature? Well, once it came out that the pharma companies were just a third party to the DOD, then it was clear that this was and is a bio-weapon and of course, shotty manufacturing ensured that the temp thing went out the window. Then of course, there's our so called leaders who passed laws protecting anyone and everyone involved with administering this poison into peoples bodies. The more that comes out, the more they deny it and double down on censoring any decent. This is a small part of a long range plan to enslave those of us who survive, via technological means. This is why they totally ignore the public about cell towers, 5/6G because they must have it, in order to control the global society. Everything digital. This way, no police is needed. Don't want to take the latest and greatest poison? Then with the flip of a switch, no money, no nothing. And if you know about it, and you think that China's social credit system is bad, this is a global version of it, so stop blaming China. All of our global leaders are part of this plan to imprison all of us, this is why they were all lockstep during the plandemic.

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**MultiChubby1** ↗ Naga
12 days ago
SAD ISN'T IT?

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**tag** ↗ Ted
14 days ago
Only those of us that have working brain cells. Rest? Blinded by the light or should I say DARK!

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**Kell Shannon** ↗ tag
11 days ago
Average IQ is 100. Given the mean, the mode & median...well it's not good.

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**Clare Goldsberry**
14 days ago
Not just pesticides! Check out the studies on the Covid vaccine's adverse impact on men -- sperm counts and motility are way down! Men who've been jabbed have very low sperm counts and sperm banks are now advertising for donor men who've NOT had the vaccine!! The jab is ruining the sperm bank business!
Yes, it's part of the eugenics program. Rather than having to kill babies through abortion and infanticide, there will be no babies -- women who've been jabbed are also having negative adverse effects as the spike proteins go to the ovaries.

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**tag** ↗ Clare Goldsberry
14 days ago
And throw in the now 5 G emf's that surround us. They have really covered their bases to genocide the human race. They don't have to worry cause they aren't human.

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**Kell Shannon**
11 days ago
Im wondering if the DEI inclusion to the study parameters were considered in the sperm-donators demographic cohort? & Control group. Did only Caucasian men counts decline? or did AFrican sperm counts decline at a similar statistical rate? Compared with the Asian & Hispanic counts? If not, its not an equitable decline. So its racism 100%. Ill have to check the pay wall at MedPub.

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**GrouchyMathGrad**
13 days ago edited
"The U.S. Environmental Protection Agency (EPA) originally planned to complete the quindecennial safety review for organophosphate pesticides between 2024 and 2025. But


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